

1. In a computing system that includes one or more processors and system memory, a method for the computing system to execute a transaction of one or more methods in a manner that the effects of the transaction may be at least partially undone even though a custom inversion process was not previously constructed for the transaction, the method comprising the following:

an act of maintaining a mapping between each of a plurality of groups of one or more direct methods with a corresponding group of one or more inversion methods that, when executed by the one or more processors of the computing system, cause the computing system to at least partially undo the effects of the execution of the corresponding group of one or more direct methods;

an act of beginning a transaction;

an act of running a group of one or more direct methods as at least part of the transaction, the group being one of the plurality of groups of one or more direct methods;

an act of using the mapping to identify the corresponding group of one or more inversion methods corresponding to the group of one or more direct methods; and

an act of recording the identity of the corresponding group of one or more inversion methods in a compensation record for the transaction.

2. A method in accordance with Claim 1, wherein the group of one or more direct methods is a first group of one or more transactions and the corresponding group of one or more inversion methods is a first group of one or more inversion methods, the method further comprising the following:

an act of running a second group of one or more direct methods as at least part of the transaction, the second group being one of the plurality of groups of one or more direct methods;

an act of using the mapping to identify the corresponding second group of one or more inversion methods corresponding to the second group of one or more direct methods;
and

an act of recording the identity of the corresponding second group of one or more inversion methods in the compensation record.

3. A method in accordance with Claim 2, further comprising the following:

an act of committing the transaction.

4. A method in accordance with Claim 3, further comprising the following:

an act of saving the compensation record to a persistent media upon the act of committing the transaction.

5. A method in accordance with Claim 3, further comprising the following:

an act of determining that the transaction should be compensated; and

an act of executing the inversion methods identified in the compensation group corresponding to the transaction.

6. A method in accordance with Claim 3, wherein the transaction is a first

transaction and the transaction record is a first transaction record, the method first comprising the following:

an act of beginning a second transaction;

an act of running a third group of one or more direct methods as at least part of the second transaction, the third group being one of the plurality of groups of one or more direct methods;

an act of using the mapping to identify the corresponding third group of one or more inversion methods corresponding to the third group of one or more direct methods; and

an act of recording the identity of the corresponding third group of one or more inversion methods in a compensation record for the second transaction.

7. A method in accordance with Claim 6, further comprising the following:

an act of committing the second transaction.

8. A method in accordance with Claim 7, wherein the first and second transaction are part of the same larger transaction.

9. A method in accordance with Claim 8, further comprising the following:

an act of determining whether a larger transaction should be compensated;

an act of executing the inversion methods identified in the first compensation record corresponding to the first transaction in response to the act of determining; and

an act of executing the inversion methods identified in the second compensation group corresponding to the second transaction in response to the act of determining.

10. A method in accordance with Claim 7, further comprising the following:

an act of saving the second compensation record to a persistent media.

11. A method in accordance with Claim 1, further comprising the following:

an act of receiving a message, wherein the act of beginning the transaction is performed in response to receiving a message.
12. A method in accordance with Claim 11, wherein the message is a HyperText Transport Protocol (HTTP) message.
13. A method in accordance with Claim 11, wherein the message is a Simple Object Access Protocol (SOAP) message.
14. A method in accordance with Claim 1, wherein each of the plurality of groups of one or more direct methods each comprise a single method.
15. A method in accordance with Claim 14, wherein each of the plurality of groups of one or more inverted methods each comprise a single inverted method.
16. A method in accordance with Claim 1, wherein each of the plurality of groups of one or more inverted methods each comprises a single inverted method.
17. A method in accordance with Claim 1, wherein the act of maintaining a mapping comprises the following for at least one of the one or more direct methods in the group of one or more direct methods:

an act of listing one or more parameters for the direct method that should be in the inverted method.

18. A method in accordance with Claim 17, wherein the act of running a group of one or more direct methods comprises the following:

an act of running the direct method using particular values corresponding to the one or more listed parameters.

19. A method in accordance with Claim 18, further comprising the following:

an act of recording values for the one or more listed parameters for the direct method in the compensation record.

20. A method in accordance with Claim 19, further comprising the following:

an act of determining that the transaction should be compensated; and

an act of executing the inversion methods identified in the compensation group corresponding to the transaction, wherein the inversion method corresponding to the direct method is executed using the recorded values in the compensation record.

21. A computer program product for use in a computing system that includes one or more processors and system memory, the computer program product for performing a method for the computing system to execute a transaction of one or more methods in a manner that the effects of the transaction may be at least partially undone even though a custom inversion process was not previously constructed for the transaction, the computer program product comprising one or more computer-readable media having thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to perform the following:

an act of maintaining a mapping between each of a plurality of groups of one or more direct methods with a corresponding group of one or more inversion methods that, when executed by the one or more processors of the computing system, cause the computing system to at least partially undo the effects of the execution of the corresponding group of one or more direct methods;

an act of beginning a transaction;

an act of running a group of one or more direct methods as at least part of the transaction, the group being one of the plurality of groups of one or more direct methods;

an act of using the mapping to identify the corresponding group of one or more inversion methods corresponding to the group of one or more direct methods; and

an act of recording the identity of the corresponding group of one or more inversion methods in a compensation record for the transaction.

22. A computer program product in accordance with Claim 21, wherein the group of one or more direct methods is a first group of one or more transactions and the corresponding group of one or more inversion methods is a first group of one or more

inversion methods, the computer program product further having thereon computer-executable instructions that, when executed by the one or more processors, further cause the computing system to perform the following:

an act of running a second group of one or more direct methods as at least part of the transaction, the second group being one of the plurality of groups of one or more direct methods;

an act of using the mapping to identify the corresponding second group of one or more inversion methods corresponding to the second group of one or more direct methods; and

an act of recording the identity of the corresponding second group of one or more inversion methods in the compensation record.

23. A computer program product in accordance with Claim 22, the computer program product further having thereon computer-executable instructions that, when executed by the one or more processors, further cause the computing system to perform the following:

an act of committing the transaction.

24. A computer program product in accordance with Claim 23, the computer program product further having thereon computer-executable instructions that, when executed by the one or more processors, further cause the computing system to perform the following:

an act of saving the compensation record to a persistent media upon the act of committing the transaction.

25. A computer program product in accordance with Claim 23, the computer program product further having thereon computer-executable instructions that, when executed by the one or more processors, further cause the computing system to perform the following:

an act of determining that the transaction should be compensated; and
an act of executing the inversion methods identified in the compensation group corresponding to the transaction.

26. A computer program product in accordance with Claim 23, wherein the transaction is a first transaction and the compensation record is a first compensation record, the computer program product further having thereon computer-executable instructions that, when executed by the one or more processors, further cause the computing system to perform the following:

an act of beginning a second transaction;
an act of running a third group of one or more direct methods as at least part of the second transaction, the third group being one of the plurality of groups of one or more direct methods;
an act of using the mapping to identify the corresponding third group of one or more inversion methods corresponding to the third group of one or more direct methods; and
an act of recording the identity of the corresponding third group of one or more inversion methods in a compensation record for the second transaction.

27. A computer program product in accordance with Claim 26, the computer program product further having thereon computer-executable instructions that, when executed by the one or more processors, further cause the computing system to perform the following:

an act of committing the second transaction.

28. A computer program product in accordance with Claim 27, wherein the first and second transaction are part of the same larger transaction.

29. A computer program product in accordance with Claim 28, further comprising the following:

an act of determining whether a larger transaction should be compensated;

an act of executing the inversion methods identified in the first compensation group corresponding to the first transaction in response to the act of determining; and

an act of executing the inversion methods identified in the second compensation group corresponding to the second transaction.

30. A computer program product in accordance with Claim 27, further comprising the following:

an act of saving the second compensation record to a persistent media.

31. A computer program product in accordance with Claim 21, further comprising the following:

an act of receiving a message, wherein the act of beginning the transaction is performed in response to receiving the message.

32. A method in accordance with Claim 21, wherein each of the plurality of groups of one or more direct methods each comprise a single method.

33. A method in accordance with Claim 32, wherein each of the plurality of groups of one or more inverted methods each comprise a single inverted method.

34. A method in accordance with Claim 21, wherein each of the plurality of groups of one or more inverted methods each comprises a single inverted method.

35. A method in accordance with Claim 21, wherein the act of maintaining a mapping comprises the following for at least one of the one or more direct methods in the group of one or more direct methods:

an act of listing one or more parameters for the direct method that should be in the inverted method.

36. A method in accordance with Claim 35, wherein the act of running a group of one or more direct methods comprises the following:

an act of running the direct method using particular values corresponding to the one or more listed parameters.

37. A method in accordance with Claim 36, further comprising the following:

an act of recording values for the one or more listed parameters for the direct method in the compensation record.

38. A method in accordance with Claim 37, further comprising the following:
an act of determining that the transaction should be compensated; and
an act of executing the inversion methods identified in the compensation group corresponding to the transaction, wherein the inversion method corresponding to the direct method is executed using the recorded values in the compensation record.

39. A computer program product in accordance with Claim 21, wherein the one or more computer-readable media are physical memory media.

40. A computer program product in accordance with Claim 39, wherein the physical memory media include system memory.

41. A computer program product in accordance with Claim 39, wherein the physical memory media include a persistent media.

42. In a computing system that includes one or more processors and system memory, a method for the computing system to execute a transaction of one or more methods in a manner that the effects of the transaction may be at least partially undone even though a custom inversion process was not previously constructed for the transaction, the method comprising the following:

an act of maintaining a mapping between each of a plurality of groups of one or more direct methods with a corresponding group of one or more inversion methods that, when executed by the one or more processors of the computing system, cause the computing system to at least partially undo the effects of the execution of the corresponding group of one or more direct methods;

an step for performing the transaction in a manner that the mapping is used to automatically generate compensation procedures that when executed by the one or more processors, cause the computing system to at least partially undo the effects of the transaction.

43. A method in accordance with Claim 42, wherein the step for performing the transaction comprises the following:

act of beginning a transaction;

an act of running a group of one or more direct methods as at least part of the transaction, the group being one of the plurality of groups of one or more direct methods;

an act of using the mapping to identify the corresponding group of one or more inversion methods corresponding to the group of one or more direct methods; and

an act of recording the identity of the corresponding group of one or more inversion methods in a compensation record for the transaction.

44. One or more computer-readable media having thereon a data structure, the data structure comprising the following:

a transaction identifier field that identifies a committed transaction of one or more groups of one or more direct methods; and

a compensation record field that identifies one or more inverted methods that, when executed, at least partially undo the effect of execution of the direct methods in the committed transaction.

45. One or more computer-readable media in accordance with Claim 44, wherein the compensation record field further include the following for at least one of the direct methods;

a parameter value field that records the actual value used for at least one of the parameters used when running the direct method during the transaction.

46. One or more computer-readable media in accordance with Claim 44, wherein the one or more computer-readable media are physical memory media.

47. One or more computer-readable media in accordance with Claim 46, wherein the physical memory media is system memory.

48. One or more computer-readable media in accordance with Claim 46, wherein the physical memory media is a persistent media.